CLAIMS

1. A variable speed maximal torque transmission comprising:

a planetary gear set comprising a peripheral ring gear enmeshing a plurality of planet gears and a sun gear in mechanical communication with said plurality of planet gears;

a carrier in mechanical communication with said planetary gear set;

a motor in mechanical drive communication with said sun gear; and

an auxiliary motor driving said peripheral ring gear.

2. The transmission of claim 1 wherein said carrier enmeshes said plurality of planet gears.

3. The transmission of claim 1 wherein said ring gear rotates at constant speed.

4. The transmission of claim 1 wherein said plurality of planet gears is three planet gears.

5. The transmission of claim 1 wherein said carrier is an output from the transmission.

6. The transmission of claim 1 wherein said carrier is coupled to a drive wheel of a vehicle.

7. The transmission of claim 1 wherein said auxiliary motor imparts power to said peripheral ring gear to satisfy the relationship $Tr \geq Ts \cdot \frac{Nr}{Ns}$ where Tr is ring gear torque, Ts is sun gear torque, Nr is ring gear tooth number and Ns is sun gear tooth number.

8. A process for operating a transmission comprising:

turning a planetary gear set with an auxiliary motor through a mechanical engagement of a toothed ring gear encompassing a set of planet gears where said set of planet gears simultaneously engages a toothed sun gear; and

driving a carrier mechanically engaging said planetary gear set.

9. The process of claim 8 wherein said planetary gear set is turned at a variable speed.

10. The process of claim 8 wherein said carrier is a transmission output operative to power a drive wheel of a vehicle.

11. The process of claim 8 wherein turning said planetary gear set induces a torque on said carrier by way of a torque on said sun gear that satisfies the equation

$$TRatio = \frac{Tc}{Ts} = \frac{-(Rs + Rr)}{Rs} = -\left(1 + \frac{Nr}{Ns}\right)$$

where Tc is the carrier torque, Ts is the sun gear torque, Nr is the tooth number of said ring gear, and Ns is the tooth number of said sun gear.